



HIV & AIDS IN THE SAARC REGION

An Update 2005

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Words from Director

Still now overall HIV prevalence in the SAARC countries remains low, but there are major public health concerns regarding the future growth potential of HIV/AIDS within the region. All the seven member countries have been pursuing efforts at the national level to arrest the growing menace triggered by the spread of HIV/AIDS.

The STC at Kathmandu has been coordinating the national efforts of Member States in their fight against HIV/AIDS. Along with other regular activities it brings out regular reports and publications with a view to disseminate information in the relevant field.

Sound, high quality, epidemiological data and characterization of disease burden and trends are basic requirements for achieving the success in prevention and control of HIV/AIDS. The present document “**HIV & AIDS in the SAARC region, an update 2005**” is such an attempt. This is the third annual report of such kind and is an update of the previous one. Estimates generated from epidemiological experts within the field have been utilized in this report. It also includes the epidemiological analysis of reported data on HIV epidemic from SAARC member countries. General information and basic epidemiology of HIV and AIDS have been updated and a new chapter on Impact of HIV has been added in this report.

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(Dr. K. K. Jha)
Director, STC

Abbreviations and Acronyms

AIDS	acquired immune deficiency syndrome
ANC	antenatal clinic
BSS	behavioural surveillance survey
FSW	female sex worker
CSW	commercial sex worker
HIV	human immunodeficiency virus
HSS	HIV sentinel surveillance
IDU	injecting drug user
IRMS	Institute of Research in Medical Statistics (New Delhi)
MSM	men who have sex with men
MTCT	mother to child transmission
NACO	National AIDS Control Organization (India)
NIHFW	National Institute of Health and Family Welfare (New Delhi)
NSACP	National STD and AIDS Control Program (Sri Lanka)
PLWH	people living with HIV
RBG	risk behavior groups
SAARC	South Asian Association for Regional Cooperation
STC	SAARC Tuberculosis Centre
STD	sexually transmitted disease
STI	sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
WHO	World Health Organization

Introduction

The SAARC (South Asian Association for Regional Cooperation) region comprises seven countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka), all of which are developing countries with diverse religious and cultural beliefs and practices. In addition to countries with varied epidemiological patterns of human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) – moderate versus low prevalence countries and different predominant HIV risk behaviour(s)- countries in the region also have extremely diverse capabilities to develop and support public health prevention and control programmes. In reviewing the current epidemiology of HIV and AIDS within the SAARC region, this diversity needs to be fully appreciated.

Through implementation of pilot basis surveillance systems for HIV prevalence, as well as sexual and injecting risk behaviours by some member countries, understanding of the many diverse HIV epidemics and their determinants in this region has improved substantially. Still now overall HIV prevalence in the SAARC countries remains low, but there are major public health concerns regarding the future growth potential of HIV epidemic within the region.

The epidemic is not homogeneous either within the region or within countries. Some countries are more affected than others and at country level there are variations in infection levels between different provinces, states or districts and between urban and rural areas. Actually the national picture is made up of a series of epidemics with their own characteristics and dynamics.¹

This report presents an overview of the HIV pandemic and a more detailed description of its epidemiology within the SAARC region. In addition to that this report also contains general information and basic epidemiology of HIV and AIDS.

General Information about HIV and AIDS

What is HIV?

HIV stands for “Human Immunodeficiency Virus”. It is a retrovirus that infects cells of the human immune system (mainly CD4 positive cells and macrophages-key components of the cellular immune system), and destroys or impairs their function. Infection with this virus results in the progressive depletion of the immune system, leading to “immune deficiency”.²

The immune system is said to be “deficient” when it can no longer fulfill its role of fighting off infection and diseases. Immunodeficient people are much more vulnerable to a wide range of infections, most of which are very rare among people without immune deficiency. Diseases associated with severe immunodeficiency are known as ‘opportunistic infections, because they take advantage of a weakened immune system.’²

What is AIDS?

AIDS stands for ‘Acquired Immune Deficiency Syndrome’ and describes the collection of symptoms and infections associated with acquired deficiency of the immune system. Infection with HIV has been established as the underlying cause of AIDS. “**Acquired**” means neither innate nor inherited but transmitted from person-to-person; “**immune**” is the body’s defense system; “**deficiency**” means not working to the appropriate degree; and “**syndrome**” means a group of signs and symptoms. The term AIDS applies to the most advanced stages of HIV infection. Because HIV progressively destroys the immune system, without any treatment most people, particularly in resource-constrained settings, will die within a few years of the first signs of AIDS.^{2,3,4}

What are the symptoms of HIV (infection)?

Most people infected with HIV do not know that they have become infected, because no symptoms develop immediately after the initial infection. Some people have a glandular fever-like illness (with fever, rash, joint pains and enlarged lymph nodes), which can occur at the time of seroconversion. Seroconversion refers to the development of antibodies to HIV and usually takes place between 45 and 90 days after an infection has occurred.²

Despite the fact that HIV infection does not cause any initial symptoms, an HIV-infected person is highly infectious and can transmit the virus to another person. The only way to determine whether HIV is present in a person’s body is by taking an HIV test.²

In fact when HIV infects a cell, it may lie inactive for years and most of the people infected with HIV does not show any symptoms or may show only minor illness for 7-10 years. These people are infected with HIV, they can spread the infection to others but still they do not have AIDS.^{3,5,6}

When does a Person have AIDS?

After the initial asymptomatic period, the virus gradually becomes activated and breaks down the human body’s natural defense mechanisms leaving it a prey to other opportunistic infections and other conditions including cancers that characterize AIDS.^{5,7}
(For details, please see *Natural History of HIV and AIDS*)

A Brief History of the Epidemic

A pattern of highly unusual infections in otherwise healthy young adults not responding to usual treatment emerged in the United States in 1981. This pattern, or syndrome, (symptom complex) was caused by an unknown entity that apparently attacked the body’s immune system. It became known as AIDS. Between 1983 and 1984 researchers isolated a new virus responsible for AIDS and named it as HIV.^{5,6,7}

Though AIDS was first recognized in the United States in 1981, it is clear that AIDS cases had occurred in several parts of the world before 1981. Evidence now suggests that the AIDS epidemic began at roughly the same time in several parts of the world, including the U.S.A. and Africa.^{5,6,7}

Although homosexual men from the United States and other developed countries were the first reported cases of AIDS worldwide, the scenario rapidly changed into that of global epidemic (pandemic). By early 1989, more than 140000 AIDS cases including men, women and children had been officially reported to WHO from around the world.⁶ According to the latest estimate as of end 2004 an estimated 39.4 million people around the world were living with HIV.⁸ During the year 2004 an estimated 4.9 million people acquired new infection. The epidemic claimed an estimated 3.1 million lives in 2004.⁸

HIV Transmission

How HIV is transmitted

The main modes of HIV transmission are:

- Unprotected sexual intercourse (anal and vaginal) and oral sex;
- Contaminated blood and blood products, tissues and organs;
- Contaminated needles, syringes and other piercing instruments; and
- Mother to child transmission (MTCT).⁵

Worldwide the most common route of HIV transmission is through unprotected sexual intercourse. Using anal route, presence of other sexually transmitted diseases (STD) (such as genital ulcers and discharges) and having multiple sex partners increase the risk of transmission. Blood borne HIV transmission occurs through contaminated blood or blood product transfusion, injections with contaminated needles and syringes, and the use of non-sterile instruments for piercing of ear, nose or skin. HIV is also transmitted from infected mother to their children during pregnancy; during childbirth or even through breast-feeding, chance of HIV transmission through breast-feeding is small.^{5,6,7}

How HIV is not transmitted

The lack of knowledge about how HIV is not transmitted can often lead to irrational fears and tendency to stigmatize or discriminate against people living with HIV and AIDS. There is no evidence that HIV is transmitted through casual contact with an HIV-infected person at home, at work or socially. The following activities will not transmit the virus:

- Shaking hands, hugging or kissing;
- Coughing or sneezing;
- Sharing food, eating or drinking utensils;
- Visiting a hospital;
- Using common toilets or swimming pools;
- Getting bites of mosquitoes or other insects.
- Caring of AIDS patients also does not carry risk of HIV transmission.^{5,6,7}

Prevention of HIV Transmission

By practicing healthy life style in every aspect, HIV transmission can be prevented. Every religion has guided its followers how to lead a risk free and healthy life style including sexual life (e.g. avoidance of premarital and extramarital sex, and avoidance of anal and oral sex).

Modern medical science also supports those guidelines. In addition to that medical science teaches us how to practice risk free medical care (e.g. sterilization of medical & surgical equipment and screening of blood before transfusion). Now it depends upon us: if we want to stop HIV transmission we must follow those guidelines and practice those teachings.

AIDS can be PREVENTED

- By being mutually faithful to sex partner
- By using only HIV screened blood or blood products when required
- By using new Needles, Syringes, Blades, Razor
- By avoiding injectable drugs and needle sharing
- By using a condom for safer sex (condom prevents unwanted pregnancy and spread of HIV & STDs)^{5,6,7}

Things to remember regarding condom use

- Use good quality condoms properly and consistently
- Avoid using condoms which are dry/brittle, sticky, discolored or date expired
- Store condoms in a cool and dry place out of direct sunlight.
- **It is not the condom on its own- it is the appropriate use of condom that produces benefit to the users.**

There is a great and urgent need

- **to promote behaviours which enable the population to practice safer sex, and**
- **to provide services such as condoms, STD treatment, and safe blood supply.**

Basic Epidemiology of HIV

With the exception of HIV transmission from mother to child and via blood /blood products, tissues or organs, all other HIV transmission occurs as a result of those human behaviour(s) that place an individual at risk of acquiring HIV infection. The primary risk behaviours that place a person at significant risk of acquiring HIV infection include the sharing of drug injecting equipment and/or having unprotected sexual intercourse with multiple sex partners. Only those persons who are involved in some HIV-risk behaviour(s) or whose sex partner is involved in some HIV-risk behaviour(s) are at risk of acquiring HIV infection via sexual intercourse.⁹

The risk of HIV transmission via sexual intercourse is increased many fold by the presence of other facilitating factors such as:

1. multiple sex partners (a pattern of concurrent or overlapping sex partners);⁹
2. a high frequency of sex partner exchange;⁹
3. concurrent other STI – a person with an untreated STI, particularly involving ulcers or discharge, is, on average, 6-10 times more likely to pass on or acquire HIV;²
4. use of anal route for sexual intercourse –transmission through anal sex has been reported to be 10 times higher than by vaginal sex;² and
5. new or recent HIV infections are very infectious compared with HIV infections of longer duration.⁹

Several epidemiological studies have shown that male circumcision is associated with a reduced rate of HIV acquisition.^{3, 10, 11}

Natural History of HIV Infection

Progression from asymptomatic HIV infection to clinical illness and AIDS

AIDS is a severe disease syndrome that represents the late clinical stage of infection with HIV. Initial infection with HIV is indicated by the presence of HIV-specific antibodies, often without any other signs or symptoms. A substantial minority of infected persons, however, experiences a short, mononucleosis-like illness (malaise, tiredness, headache, abdominal discomfort, anorexia, swelling of lymph nodes and fever) about 2-5 weeks after infection. During this acute phase of infection, there may be a significant depression of the cellular immune system (immune system is body's natural defense mechanism which protects the body against disease) and infected persons at this early stage are considered extremely infectious. Subsequently, the immune system rebounds to generally normal levels and the infected person becomes asymptomatic for periods ranging from many months to many years.⁹

HIV infection attacks the cellular immune system. Continued damage to the immune system eventually makes HIV-infected individuals susceptible to various opportunistic infections and cancers. Initial illnesses related to the increasing immune deficiency caused by HIV are generally mild to moderate in severity, and tend to be nonspecific. The first infections

described in patients with AIDS were due to ubiquitous (ever-present) organisms that do not usually cause disease in healthy persons; the cancers that developed in AIDS patients were of types that had been diagnosed only rarely in the past. Subsequently, it became clear that persons with HIV infection could contract almost any common or uncommon infectious disease, or some malignancies, because of their immune deficiency.⁹

The time period of progression from HIV infection to symptomatic disease is highly variable: symptoms may occur within a year, although rarely, or may take more than 10 years to appear. Over a variable time period from many months to many years, infected persons begin to develop clinical disease related to progressively increasing immune deficiency. Early symptoms may include swollen lymph nodes, night sweats, fever, diarrhoea, profound weight loss, fatigue and uncommon infections. Continued destruction of the immune system leads to AIDS, which is characterized by life-threatening opportunistic infections and cancers.⁹

Clinical staging

The majority of people infected with HIV, if not treated, develop signs of AIDS within 8-10 years. AIDS is identified on the basis of certain infections, grouped by the World Health Organization:²

- Stage I HIV disease is asymptomatic and not categorized as AIDS
- Stage II (includes minor mucocutaneous manifestations and recurrent upper respiratory tract infections)
- Stage III (includes unexplained chronic diarrhea for longer than a month, severe bacterial infections and **pulmonary tuberculosis**) or
- Stage IV (includes Toxoplasmosis of the brain; Candidiasis of the esophagus, trachea, bronchi or lungs, and Kaposi's sarcoma) HIV disease is used as indicators of AIDS.

Most of these conditions are opportunistic infections that can be treated easily in healthy people.

In addition AIDS is also defined on the basis of a CD4 positive T cell count of less than 200 per cubic mm of blood.²

Till now there is neither any vaccine to prevent the AIDS nor any treatment to cure AIDS, presently available treatment can only extend life. So for the moment prevention of transmission of infection remains the only method of control.

Survival time after diagnosis of AIDS

The survival time after onset of severe AIDS-characteristic illness is also variable. Prior to the development of effective anti-HIV (anti-retroviral) drug treatment, average survival time was about 2-4 years in most developed countries and about 6 months or less in developing countries. The shorter survival periods in developing countries were most likely due to diagnosis at a later stage of disease and limited access to adequate supportive medical care.⁹

Global Situations of HIV and AIDS

Global summary of HIV epidemic

Current estimates suggest that at the end of 2004, 39.4 (35.9-44.3) million people around the world were living with HIV. An estimated 4.9 (4.3-6.4) million people acquired the HIV virus (infection) in 2004. The AIDS epidemic claimed 3.1 (2.8-3.5) million lives in 2004, and around 25 million since the first cases of AIDS were identified in 1981. More than 94% of the people living with HIV/AIDS are adults aged between 15-49 years and the rest (5.6%) are children aged below 15 years. Among the adults living with HIV more than 47 % are women. The new infections included an estimated 640 000 children comprising over 13 % of the total new infection.⁸

Table 1: Global summary of the HIV/AIDS epidemic as of end 2004^{8*}

Estimated number of people living with HIV	Total	39.4 (35.9-44.3) million
	Adults (15-49 years)	37.2 (33.8 -41.7) million
	Women	17.6 (16.3- 19.5) million
	Children < 15 years	2.2 (2.0-2.6) million
People newly infected with HIV in 2004	Total	4.9 (4.3 – 6.4) million
	Adults	4.3 (3.7– 5.7) million
	Children < 15 years	640 000 (570 000 -750 000)
AIDS deaths in 2004	Total	3.1 (2.8 – 3.5) million
	Adults	2.6 (2.3 – 2.9) million
	Children < 15 years	510 000 (460 000 – 600 000)

NB. The numbers are according to latest estimates produced and compiled by UNAIDS/WHO. Estimated number of people living with HIV includes all people with HIV infection, whether or not they have developed symptoms of AIDS.

The epidemic remains extremely dynamic, growing and changing character as the virus exploits new opportunities for transmission. There is no room for complacency anywhere. Virtually no country in the world remains unaffected.¹

Compared with two years ago, the number of PLWH has raised in every region, with steepest increase in East Asia, and in Eastern Europe and Central Asia (Table 2, 3). Sub-Saharan Africa remains by far the worst affected region, with 25.4 million PLWH at the end of 2004, compared to 24.4 million in 2002. Nearly two thirds (64%) of all people living with HIV are in sub-Saharan Africa.⁸

* *Global Summary of the HIV/AIDS epidemic as of Dec. 2005 is given inside the back cover page*

Table 2: Adults and children living with HIV, end 2002 and end 2004 globally by region (according to new estimate) ⁸

Region	2004		2002	
	Adults and children living with HIV	Adult prevalence (%)	Adults and children living with HIV	Adult prevalence (%)
Sub-Saharan Africa	25.4 (23.4-28.4) million	7.4 (6.9-8.3)	24.4 (22.5- 27.3 million)	7.5 (7.0-8.4)
North Africa & Middle East	540 000 (230 000-1.5 million)	0.3 (0.1-0.7)	430 000 (180 000- 1.2 million)	0.2 (0.1-0.6)
South and South-East Asia	7.1 (4.4-10.6) million	0.6 (0.4-0.9)	6.4 (3.9-9.7) million	0.6 (0.4-0.9)
East Asia	1.1 million (560 000-1.8 million)	0.1 (0.1-0.2)	760 000 (380 000-1.2 million)	0.1 (0.1-0.2)
Latin America	1.7 (1.3-2.2) million	0.6 (0.5-0.8)	1.5 (1.1-2.0) million	0.6 (0.4-0.7)
Caribbean	440 000 (270 000-780 000)	2.3 (1.5-4.1)	420 000 (260 000-740 000)	2.3 (1.4-4.0)
Eastern Europe & Central Asia	1.4 million (920 000 – 2.1 million)	0.8 (0.5-1.2)	1.0 million (670 000-1.5 million)	0.6 (0.4-0.8)
Western & Central Europe	610 000 (480 000- 760 000)	0.3 (0.2-0.3)	600 000 (470 000-750 000)	0.3 (0.2-0.3)
North America	1.0 million (540 000- 1.6 million)	0.6 (0.3-1.0)	970 000 (500 000- 1.6 million)	0.6 (0.3-1.0)
Oceania	35 000 (25 000- 48 000)	0.2 (0.1-0.3)	28 000 (22 000-38 000)	0.2 (0.1-0.3)
Total	39.4 (35.9-44.3) million	1.1 (1.0-1.3)	36.6 (33.3-41.1) million	1.1 (1.0-1.2)

The ranges around the estimates in this table define the boundaries (low to high estimates) within which the actual numbers lie, based on the best available information. These ranges are more precise than those of previous years' estimate. These are all according to new estimate.

Table 3 Adults and children newly infected with HIV, and died due to AIDS in 2002 and in 2004 globally by region (according to new estimate) ⁸

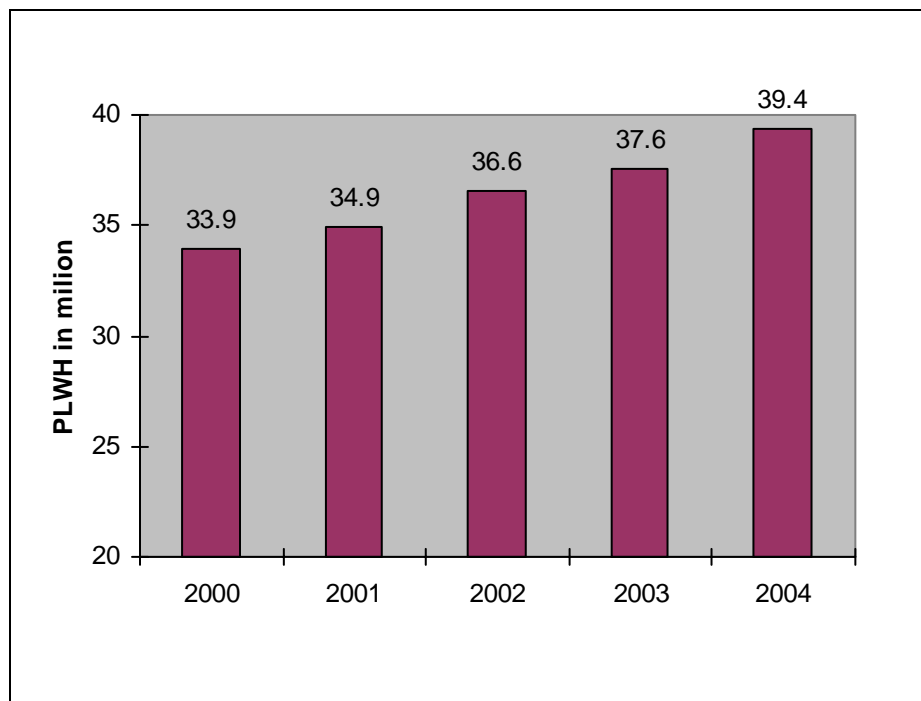
Region	Adults and children newly infected with HIV		Adult & Children died due to AIDS	
	2004	2002	2004	2002
Sub-Saharan Africa	3.1 (2.7-3.8) million	2.9 (2.6-3.6) million	2.3 (2.1-2.6) million	2.1 (1.9-2.3) million
North Africa & Middle East	92 000 (34 000-350 000)	73 000 (21 000-300 000)	28 000 (12 000-72 000)	20 000 (8300-53 000)
South and South-East Asia	890 000 (480 000-2.0 million)	820 000 (430 000-2.0 million)	490 000 (300 000-750 000)	430 000 (260 000 -650 000)
East Asia	290 000 (84 000-830 000)	120 000 (36 000-360 000)	51 000 (25 000-86 000)	37 000 (18 000-63 000)
Latin America	240 000 (170 000-430 000)	190 000 (140 000-320 000)	95 000 (73 000 120 000)	74 000 (58 000- 96 000)
Caribbean	53 000 (27 000—140 000)	52 000 (26 000-140 000)	36 000 (24 000-61000)	33 000 (22 000-57 000)
Eastern Europe & Central Asia	210 000 (110 000-480 000)	190 000 (94 000- 440 000)	60 000 (39 000-87 000)	40 000 (27 000-58 000)
Western & Central Europe	21 000 (14 000-38 000)	18 000 (13 000-35 000)	6 500 (<8 500)	6 000 (<8000)
North America	44 000 (16 000-120 000)	44 000 (16 000-120 000)	16 000 (8 400-25 000)	16 000 (8 400-25 000)
Oceania	5 000 (2 100-13 000)	3 200 (1 000-9600)	700 (<1 700)	500 (<1000)
Total	4.9 (4.3-6.4) million	4.5 (3.9-6.2) million	3.1 (2.8-3.5) million	2.7 (2.5-3.1) million

The ranges around the estimates in this table define the boundaries (low to high estimates) within which the actual numbers lie, based on the best available information. These ranges are more precise than those of previous years' estimate. These are all according to new estimate.

Trends of global HIV infection

The number of people living with HIV continues to rise, despite the fact that effective prevention exist. All the estimates using the following table and also in this report are based on updated estimation methodologies and the latest available data unless otherwise mentioned. Hence current estimates cannot be compared directly with that of previously published reports. According to new estimates the total number people living with HIV, globally are shown in Figure 1.

Figure 1: Estimated number of people living with HIV, globally, 2000-2004 ⁸



One point is to be kept in mind while considering the number of PLWH in any particular year, that this figure is the result of addition of new HIV infection and subtraction of new deaths due to AIDS in that year to and from the previous year's figure of PLWH. For example,
$$\text{PLWH at end 2004} = (\text{PLWH, end 2003} + \text{New HIV infection in 2004} - \text{Deaths due to AIDS in 2004}).$$

HIV and AIDS in Asia

Although overall national HIV infection levels in Asia are low compared with some other continents, notably Africa, but the populations of many Asian nations are so large that even low national HIV prevalence means large number of people are living with HIV. According to latest estimate some 8.2 million people (adult & children) were living with HIV at the end of 2004, including 1.2 million people who became newly infected in the year 2004. Some 540 000 people died due to AIDS in 2004 (Table 4).⁸

Table 4: HIV & AIDS estimates in Asia, end 2002 and end 2004

year	Adults & Children living with HIV	Number of Women living with HIV	Adults & Children newly infected with HIV	Adult (15-49) HIV Prevalence (%)	Adult & Child deaths due to AIDS
2004	8.2 (5.4-11.8) million	2.3 (1.5-3.3) million	1.2 million (720 000-2.4 million)	0.4 (0.3-0.6)	540 000 (350 000- 810 000)
2002	7.2 (4.6-10.5) million	1.9 (1.2-2.8) million	1.1 million (540 000 -2.5 million)	0.4 (0.2-0.5)	470 000 (300 000-690 000)

Asia is not just vast but diverse, and HIV epidemics in the region share that diversity, with the nature, pace and severity of epidemics across the region.⁸

HIV epidemic in this region remains largely concentrated among injecting drug users, sex workers, men who have sex with men, clients of sex workers and their sexual partners. But the region is also under threat of generalization of the epidemic.¹

HIV and AIDS in the SAARC Region

All the SAARC countries are reporting cases of HIV and AIDS and the epidemic is spreading rapidly in most of the countries. India has the single largest proportion of HIV positive cases within its border, second globally to South Africa. On the basis of available information it can be assumed that over 5 million estimated HIV infected people are living within the region.¹ The danger for SAARC region rests in the low 'general population' prevalence rates, which may be undermining the gravity of the situation. Such low rates conceal dangerously elevated 'concentrated' infection rates within high-risk groups such as CSW, MSM, IDU etc. The fact is that despite the low prevalence rates within this region, the factors are in place to spread HIV epidemic farther and faster than in any other region globally. The existence of high-risk group behaviours, migrant workers, truckers, mobile populations in search of sexual pleasure, drugs, and commerce, the unequal status of women, the lack of population awareness of 'basic' risks and prevention strategies, the trafficking of women and young girls within the sex trade, the high rates of STIs etc., all make for an explosion of HIV epidemic within the region.

The country specific HIV/AIDS estimates are given below:

Table 5: Estimated number of people living with HIV in SAARC Region, end 2003¹

Country	Number of PLWH		Adult Population (Approximately)	HIV Prevalence Rate (%) among Adults
	Adults & children	Adults		
Bangladesh	7 775*	7 775*	76 200 000	<0.1(0.01)
Bhutan	100**	100**	94 000	<0.1 (0.01)
India	5 100 000	5 000 000	530 000 000	0.9
Maldives	60***	60***	132 000	<0.1(0.05)
Nepal	61 000	6 0000	11 350 000	0.5
Pakistan	74 000	73 000	71 000 000	0.1
Sri- Lanka	3 500	3 500	10 422 000	0.03
Regional	5 246 435	5 144 435	6 991 980 000	0.75

* (Country information, end December 2004) ** on assumption from previous data⁹

*** Data from Maldives National AIDS Control Programme

Reported HIV and AIDS Cases by SAARC Member Countries

In the SAARC region first HIV/AIDS cases were reported in 1986 by India and Pakistan and by 1993 all SAARC countries started reporting these cases. Update available information on cumulative number of reported HIV and AIDS cases by SAARC countries is given below.

Table 6 Cumulative No. of reported HIV & AIDS Cases by SAARC member countries ¹²⁻¹⁸

Country	HIV positive including AIDS	AIDS out of total HIV+	Death due to AIDS	As of	1s case detected
Bangladesh ¹²	465	87	44	Dec. 2004	1989 HIV +
Bhutan ¹³	72	14	14	May 2005	1993 (AIDS)
India ¹⁴	-	111608	-	July 2005	1986 (AIDS)
Maldives ¹⁵	13	10	9	Dec. 2004	1991 (AIDS)
Nepal ¹⁶	5201	901	257	July 2005	1988 (AIDS)
Pakistan ¹⁷	2741	310	148	Dec 2004	1986 (AIDS)
Sri Lanka ¹⁸	674	194	136	June 2005	1987 (HIV +)*

* HIV first reported in a foreigner in 1986;
First Sri Lankan with HIV detected in 1987

Country Status

This section provides additional details on the HIV and AIDS situation for each country in the SAARC region. Countries are presented in a descending order, starting with countries with the highest estimated HIV prevalence rate, to those countries with the lowest estimated HIV prevalence rates. The situation in each country is presented, along with an epidemiological analysis of reported cases.

India

India (as a whole) is one of the moderate HIV prevalence countries. It is one of the largest countries in southern Asia- geographically it is the seventh largest and second most populous nation in the world. Its estimated total population in 2003 was more than one billion (106542272),¹⁹ with over half a billion in the 15-49 year-old age group. India shares land borders with Bangladesh, Bhutan, China, Myanmar, Nepal, and Pakistan. The shift of population from rural to urban areas is slower in India than in most developing countries, but one-fourth of the total population is urban.⁹

HIV and AIDS situation

HIV infections were likely imported into India in the early to mid-1980. The first case of AIDS in India was detected in 1986. Since then, HIV infections have been reported in all States and Union Territories. The prevalence of the infection in all parts of the country highlights the spread from urban to rural areas and from high-risk groups to the general population.^{1,9}

The National AIDS Control Organization (NACO), Ministry of Health & Family Welfare updates the HIV estimates for the country every year since 1998 for monitoring the trends and pattern of HIV epidemic in the country.²⁰

The HIV burden is estimated on the basis of the HIV prevalence observed at designated sentinel surveillance sites for different risk groups. People who have high-risk behavior for HIV infection include those attending STD clinics, MSM (Men having sex with men) and FSW (Female sex workers) intervention centers and drug de-addiction centers. Antenatal clinics attendees are considered to be the representative of general population. Blood samples collected from respective risk groups are tested for HIV following 'Unlinked Anonymous' procedure at regular intervals annually. The Data thus compiled was used for epidemiological analysis and estimation purpose.²⁰

In 2004, the total number of sentinel sites stands at 659 and this includes 171 STD sites, 269 ANC sites, 24 IDU sites, 15 MSM sites, 42 FSW sites, 132 ANC (rural) and 6 TB sites.²⁰

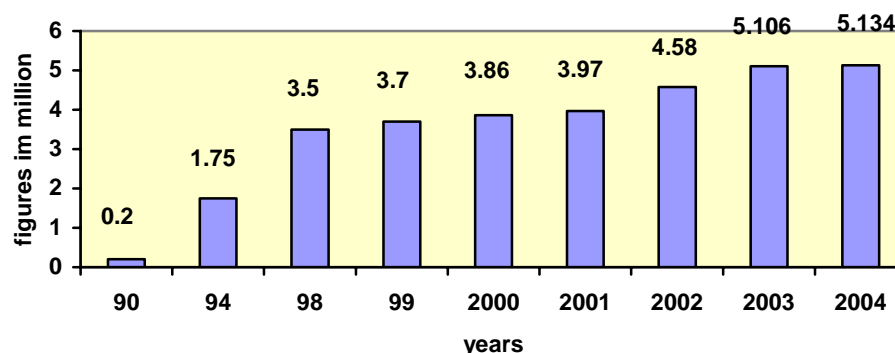
Estimation Process

In order to ensure independence and objectivity in the entire exercise (done as per laid down procedures and guidelines by WHO and UNAIDS), two independent institutions have been assigned this task. These institutes include Institute of Research in Medical Statistics (IRMS), New Delhi and National Institute of Health and Family Welfare (NIHFW), New Delhi.²⁰

HIV Estimates

HIV estimates are derived on the basis of HIV prevalence observed from STD, ANC, IDU, MSM and FSW sites. The estimated number of HIV infections for the year 2004 is 5.134 million. In 1998 it was 3.5 million and four years before i.e. in 1994 it was 1.75 million.^{14, 21} Estimates of PLWH in India for the year 1990, 1994 & 1998-2004 are shown in figure 2.

Figure 2: HIV Estimates: India, for the year 1990, 1994 & 1998-2004^{14, 21}



As evident from the data indicated above, India continues to be in the category of low prevalence countries with overall prevalence of less than 1%. However, there are sub-national epidemics in various parts of the country with the evidence of high prevalence of HIV among both STD clinic attendees and antenatal clinic attendees. The high HIV prevalence states are Maharashtra, Tamil Nadu, Manipur, Andhra Pradesh, Karnataka and Nagaland. These six states have been identified as high prevalence because the HIV prevalence rates exceeded 5% among high-risk groups and exceeded 1% among antenatal women.²¹

In absolute numbers, India continues to stand second next to South Africa (5.3 million HIV infections). However in terms of prevalence percentage India has HIV prevalence of 0.91% among adult population as compared to 21.5% in South Africa.²⁰

With about 25% of the total population, urban area accounts for more than 41% of the total estimated HIV infections. About 39% of the total HIV infected people were females, M: F ratio being 1.57: 1, and there was no significant sex difference of HIV infection between rural and urban areas (Table 7).²⁰

Table 7: Distribution of HIV infected population (Lakhs) by sex and residence (urban – rural)

Residence	Male	Female	Total (%)	M/F Ratio
Urban	13.29	7.98	21.27 (41.43)	1.67
Rural	18.03	12.04	30.07 (58.57)	1.50
Total	31.32	20.02	51.34 (100.00)	1.57

Reported AIDS cases in India with epidemiological analysis ¹⁴

As reported to the National AIDS control organization (NACO), the cumulative number of AIDS cases as of 31 July 2005 was 111608. Among them 79041 (70.8%) were males and 32567 (29.2%) were females with a male female ratio of 2.4:1 (Figure 3 & 4). In February 2004, 73% of the reported AIDS cases were males with a male female ratio of 2.7:1 ²² So, number of female cases is increasing more in comparison to that of male cases.

Figure 3 Cumulative # of reported AIDS cases, India, Feb-2004 & July-2005

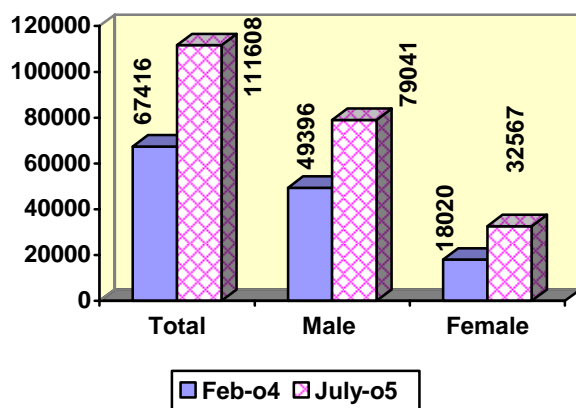
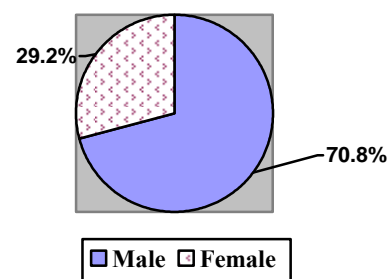


Figure 4 Sex distribution of reported AIDS cases, India as of 31 July 2005



Epidemiological analysis of reported AIDS cases reveals that:

- Disease is affecting mainly the people in sexually active age group. About 89% of the cases are in the age group of 15-49 years (Table 8 & figure 5).
- Males account for 70.8% of AIDS patients and females 29.2%, the M:F ratio being 2.4:1. The proportion of female cases is increasing.
- The predominant mode of transmission of infection in the AIDS patients is through heterosexual contact (86%) followed by perinatal transmission (3.6%), IDUs (2.4%), blood & blood products (2%) & in 6 % of cases, history of mode of transmission was not available (Figure 6).

Table 8: Age and sex distribution of reported AIDS cases in India as of 31 July 2005

Age group	Male	Female	Total
0-14 yrs	2 860	1 994	4 854
15-29 yrs	21 782	14 405	36 187
30-44 yrs	48 342	14 508	62 850
45+ yrs	6 057	1 660	7 717
Total	79 041 (70.8%)	32 567 (29.2%)	111 608 (100%)

Figure 5: Age and sex distribution of AIDS cases in India as of 31 July 2005

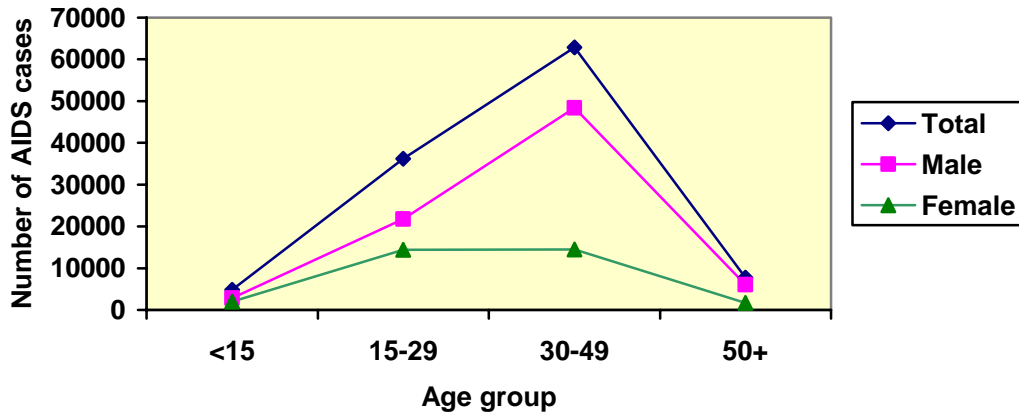
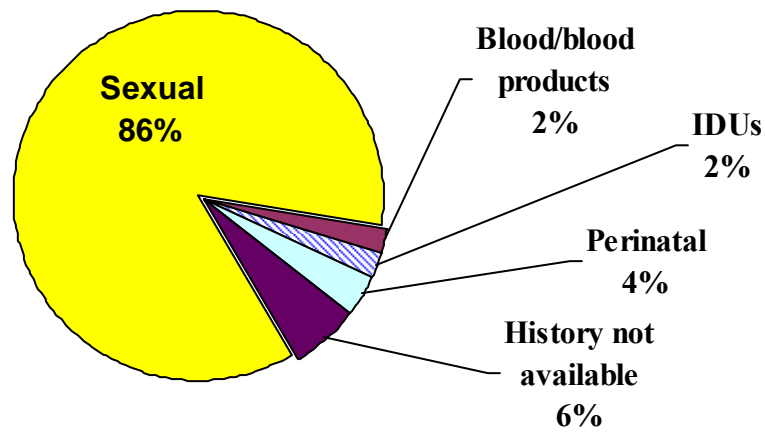
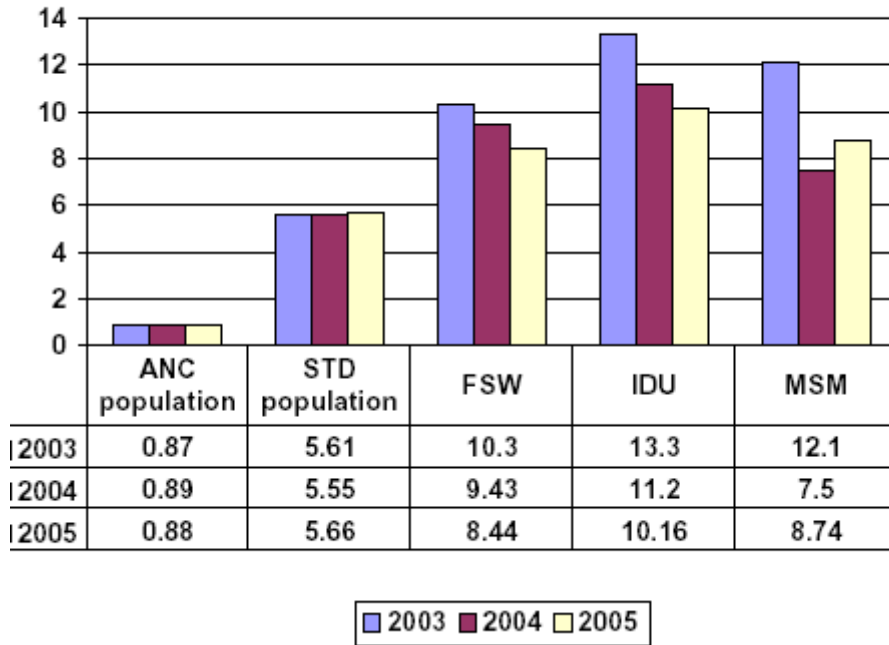


Figure 6: Risk/Transmission categories of AIDS cases in India, as of 31 July 2005



Graph I: Year Wise trend in HIV prevalence percentage among different population groups in India (2003-2005)



Nepal

The Kingdom of Nepal is a highly heterogeneous country in terms of geography, ethnicity, language and culture. Nepal is landlocked sharing borders with India and China. It is made up of 75 districts divided into five different development regions (Far- Western, Mid-Western, Western, Central and Eastern). The Himalayas cover the northern third of the country from east to west, bordering China. To their south lies a long east-west stretch of lower mountains (the hilly region) whose southern flanks flatten into the Terai, a fertile, Sub-tropical plain spanning the border with India. These contours have played a major role in helping to determine the geographical and social diversity that characterizes Nepal.²³

The population of Nepal in 2003 was estimated to be 25.16 million.¹⁹ The urban population in Nepal is mostly concentrated in the Kathmandu valley. Nepal has a market economy largely based on agriculture and tourism.²²

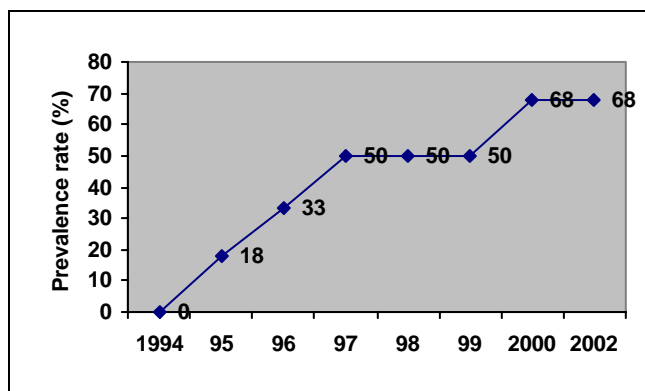
In Nepal, the topography, environmental degradation, poverty and economic migration are linked and they combine with other factors to increase the vulnerability to HIV.²³

HIV and AIDS Situation

The first HIV infection in Nepal was identified in 1988.²⁴ During the early 1990s, HIV seroprevalence surveys detected HIV infections among STI patients and FSW throughout most regions in Nepal. As a result, there is great public health concern that extensive spread of HIV, similar to that documented in several neighboring countries (Cambodia, Myanmar, Thailand and parts of India) might occur. IDUs in Nepal were initially believed to share injection equipment in relatively small and isolated networks. However, since the mid-1990s, an explosive increase in HIV infection (infecting about one-half of all IDU throughout the country and near about two-third in the Kathmandu valley) has occurred (Figure 7).^{23, 25}

Nepal also has a unique situation with regard to the number and mobility of FSW and young males who work in India. Large numbers of young Nepalese girls are recruited as FSW to Indian cities, and large numbers of young Nepalese males working in India frequently visit FSW there and within Nepal. Thus, in addition to the increasing number of HIV infections occurring among persons with high HIV- risk behaviours in Nepal, there are also increasing numbers of Nepalese FSW and young male Nepalese workers who have been infected with HIV in India, and who have returned or will be returning to Nepal.⁹ The estimated number of adults and children living with HIV/AIDS as end 2003 in Nepal was 61,000 (range 29000-110000) with a prevalence rate of 0.5% (range 0.3-0.9) of the total 15-49 year-old population.¹

Figure 7 HIV prevalence among IDUs in Kathmandu, Nepal, 1994-2002 ^{23, 25}



NB. Ref No. 25 (for 1994-2000 data) & Ref No. 23 (for 2002 data)

Reported HIV and AIDS cases in Nepal ¹⁶

As reported to the National Centre for AIDS and STD control, Teku, Kathmandu, Nepal, the cumulative number of HIV positive cases as of 31 July 2005, was 5201 (Table 9). Among them 73% were males and 27% were females with a male: female ratio of 2.7:1. Out of these total HIV positive cases, 901 were full blown AIDS cases; 72% males and 28% females, (M: F= 2.6:1). A Total of 257 deaths due to AIDS were reported; of those, 24 died during Jan-July 2005.

Table 9: Reported HIV and AIDS cases in Nepal as of 31 July 2005

Condition	Male	Female	Total	New cases in Jan-July 2005
HIV positive including AIDS	3790 (73%)	1411 (27%)	5201	708
AIDS out of total HIV +	649 (72%)	252 (28%)	901	55

Epidemiological analysis of reported HIV positive cases reveals that:

- Males account for 73 % of HIV/AIDS patients the male: female ratio being 2.7:1 (Tables 9 & 10, and Figure 8).
- Disease is affecting mainly the people in sexually active age group. Nearly 96 % of the cases are in the age group of 15-49 years (Table 10 & Figure 9).
- About 54% of the reported HIV positive cases belong to clients of sex workers followed by IDUs (19.55%), sex workers (11.34%) and housewives (13%) (Table 11 & Figure 10).

Table 10: Cumulative HIV infection by age group, as of 31 July 2005, Nepal

Age group (years)	Male	Female	Total
0-4	35	22	57
5-9	32	22	54
10-14	18	7	25
15-19	174	174	348
20-24	720	338	1 058
25-29	958	372	1 330
30-39	1 436	365	1 801
40-49	355	95	450
50+	62	16	78
Total	3 790 (73%)	1 411 (27%)	5 201

Figure 8: Sex distribution of reported HIV + cases in Nepal as of 31 July 2005

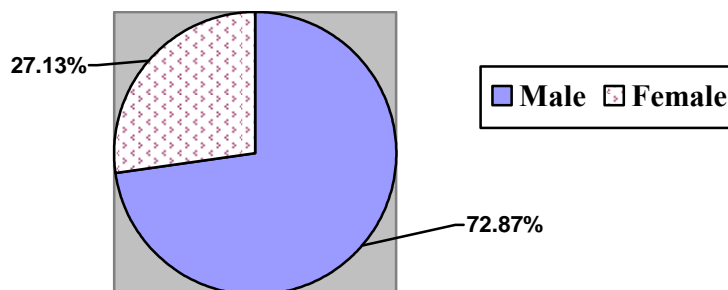


Figure 9: Cumulative HIV infection by age group, as of 31 July 2005, Nepal

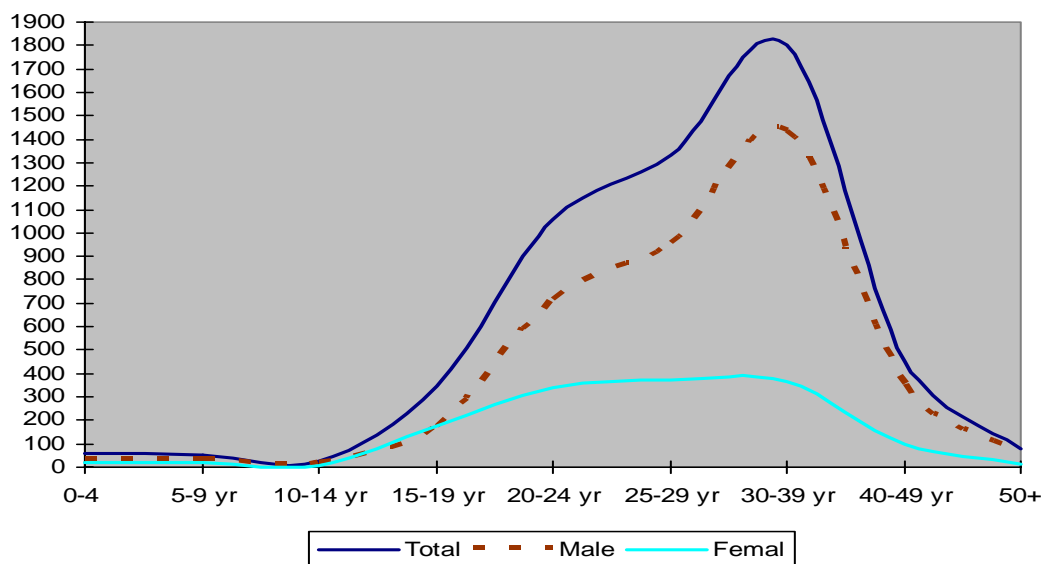
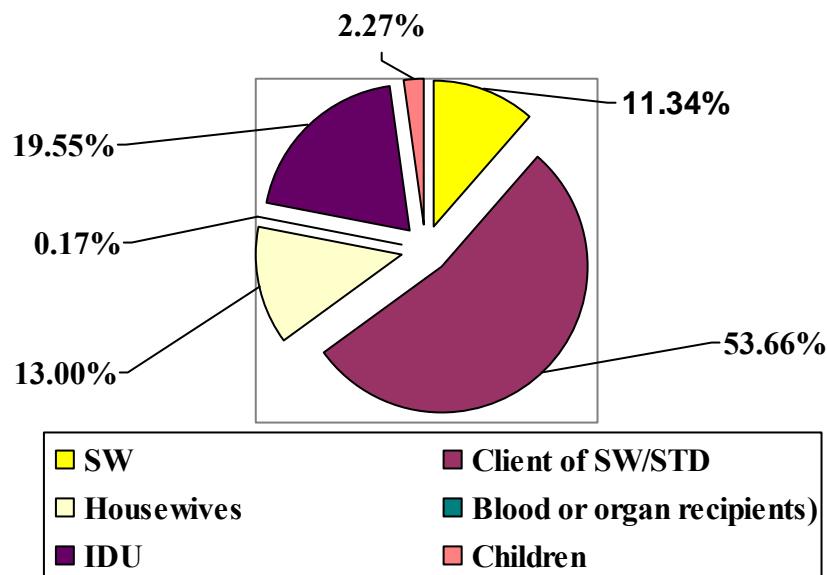


Table 11: Cumulative HIV infection by sub-group and sex as of 31 July 2005, Nepal

Sub-groups	Male	Female	Total
Sex Workers (SW)		590	590
Clients of SW/STD	2 707	84	2 791
Housewives		676	676
Blood or organ recipients	7	2	9
Injecting Drug Use	1 002	15	1 017*
Children	74	44	118
Total	3 790	1 411	5 201

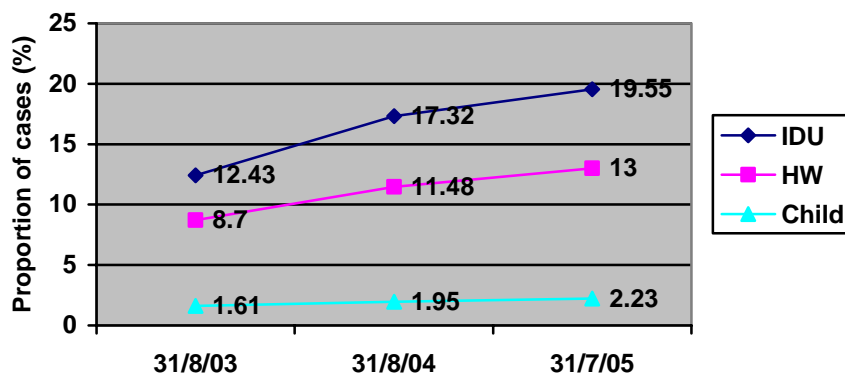
*Mode of Transmission –IDU or Sexual

Figure 10: Cumulative HIV infection by sub group as of 31 July 2005, Nepal



Among the subgroups the proportion of children and housewives are in increasing trends (Figure 11), indicating the spread of HIV infection from high-risk groups to general population. The clients of sex workers comprising about 54% of the HIV infected people are the major contributors in transmitting the infection from sex workers to house wives (mothers) and then to children. The proportion of IDU, the most badly affected high-risk group in Nepal is also showing increasing trend. These IDUs some of whom visits sex workers and also lead conjugal lives are the substantial transmitter of HIV infection to mother & children. (cf Bangladesh chapter)

Figure 11: Trends of proportions of house wives, children & IDUs, among the reported HIV positive cases in Nepal



Pakistan

Pakistan is Asia's seventh largest country occupying the northwestern portion of the Indian subcontinent. It is bounded to the west by Iran, to the north by Afghanistan, to the northeast by China, to the east and southeast by India, and to the south by the Arabian Sea. The estimated population in 2003 was about 153 577 848.¹⁹ Almost all of the population is Muslim; Hindus and Christians make up small minority groups.⁹

HIV and AIDS situation

Pakistan, as of end 2003, had an estimated 74000 (range 24000-150000) people (adults and children) living with HIV. The number of adults living with HIV was 73000 equals to 0.1% HIV prevalence level that can be considered low.¹

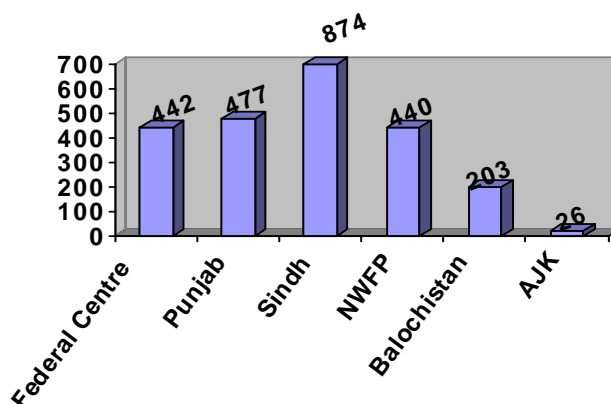
Though HIV prevalence appears to be low in Pakistan but the risk seems to be high. Because the presence of a number of vulnerabilities and risky behavioural patterns may cause emergence of a widespread epidemic in near future if an urgent, prioritized and coordinated action could not be taken. Poverty, gender inequalities and low levels of education and literacy all contribute to HIV vulnerability in Pakistan. Other related factors that can increase vulnerability at the individual level include unemployment, social exclusion or marginalization, physical and/or mental abuse, silence and denial, large number of internal and external migrants, a high proportion of adolescents and young adults and gender-based discrimination.^{26, 27}

Reported AIDS cases in Pakistan with epidemiological analysis

The first case of AIDS in a Pakistani citizen was reported in 1987 in Lahore. During the late 1980s and 1990s, it became evident that an increasing number of Pakistanis, mostly men were becoming infected with HIV while living or traveling abroad. Upon their return to Pakistan, some of these men subsequently infected their wives who in some cases, passed along the infection to their children. In 1993, the first recognized transmission of HIV infection through breastfeeding in Pakistan was reported in the city of Rawalpindi. During the 1990s, cases of HIV and AIDS began to appear among groups such as CSWs, drug abusers and jail inmates. The increased rates of infection among these groups are assumed to have facilitated, at least to some extent, a further dissemination of HIV into the general population.²⁶

At the end of 2002 the cumulative number of reported HIV/AIDS cases was 1998; among them 233 were AIDS cases.²⁸ By the end of June 2004 the reported number HIV/AIDS cases became 2462 out of which 286 were AIDS cases. The highest number (874) of the reported cases was from Sindh Province and lowest number (26) was from Azad Jammu & Kashmir (AJK) (Figure 12). Of the total 2462 HIV positive cases 2150 (87%) were males and rest 13 % were females.²⁷

Figure 12: Area wise cumulative number of reported HIV positive cases in Pakistan, end of June 2004

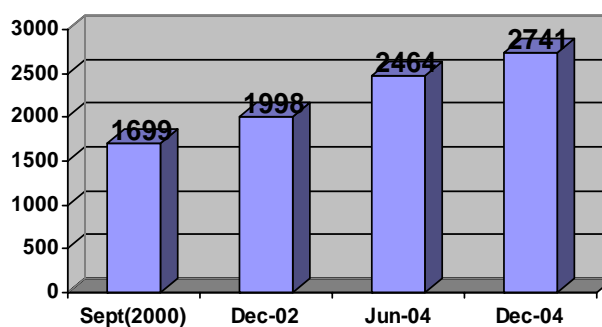


Latest country report shows that as of December 2004, the total number of reported HIV positive cases (including AIDS) were 2741. Among them 310 were full-blown AIDS cases. Number of reported deaths due to AIDS (as of December 2004) was 148. Of the total 2741 cases 12 % were females.¹⁷ Reported number of HIV and AIDS cases from September 2000 to December 2004 are shown in Table 12 & figure 13.

Table 12: Cumulative No. of Reported HIV and AIDS cases, Pakistan, Sept/2000 – Dec/2004

As of	Total HIV+ cases	AIDS cases out of HIV+ cases
6 Sept. 2000 ²⁶	1 699	Data not available
Dec. 2002 ²²	1 998	233
June 2004 ²²	2 462	286
Dec. 2004 ¹⁷	2 741	310

Figure 13: Cumulative No. of Reported HIV+ cases in Pakistan, Sept-2000 to Dec-2004



Sri-Lanka

Sri-Lanka is an island country in the Indian Ocean, separated from the south-eastern coast of peninsular India. Its estimated population in 2003 was approximately 19.3 million, with about 54% within the 15-49 year old age group.²⁹ The Sinhalese are the predominant ethnic group, constituting about three quarters of the population. Other ethnic groups include the Tamils and the Muslims.⁹

HIV and AIDS situation

The available data for Sri-Lanka indicate that the extensive spread of HIV had not occurred as of the year 2003. The best estimate for total number of people living with HIV in Sri-Lanka, as of the year 2003 is about 3,500 (range 1200-6900) and the prevalence rate of HIV infection among adults (15-49) is less than 0.1%.¹

Reported HIV/AIDS cases in Sri Lanka with epidemiological analysis

In Sri Lanka, HIV infection was first reported in a foreigner in 1986. The first Sri-Lankan infected with HIV was reported in 1987 and the first indigenously transmitted HIV case was reported in 1989. As of 30 June 2005, the cumulative number of HIV positive cases reported to the National STD/AIDS control Programme (NSACP) was 674; 402 (60%) males and 272 (40%) females (Table 13 & Figure 14). Among them, 194 persons were reported as having AIDS. Reported number of AIDS deaths was 136.¹⁸ The yearly reported cases clearly show an increasing trend (Figure 15).

Table 13: Cumulative No. of reported HIV & AIDS cases, Sri Lanka, as of 30 June 2005

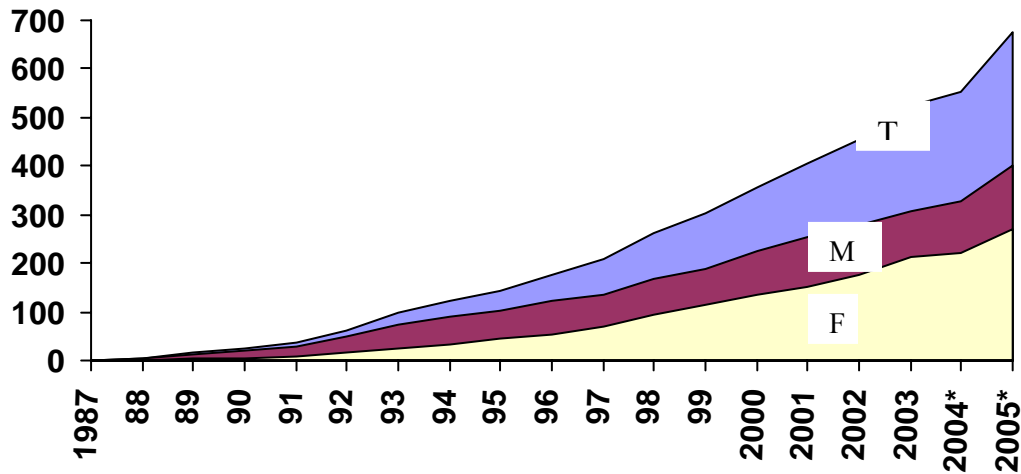
Condition	Male	Female	Total
HIV + including AIDS	402 (60%)	272 (40%)	674
AIDS	-	-	194
Death due to AIDS	-	-	136

Age and sex distribution of reported HIV positive cases

Age and sex distribution of the reported HIV positive cases are available up to June 2004 and the cumulative number was 552. Of the 552 reported cases, age was available for 507 (about 92%) cases. Of these, >90% were in the 15-49 year age group (Table 14). In the first 5 years of the epidemic, the male to female ratio was 3.2:1, which decreased to 2:1 in the following 5 years. At the end of December 2000, it was 1.6:1, and as of 30 June 2004 it became 1.48:1.²² According to data as of June 2005 the ratio became 1.5:1.¹⁸ This trend indicates a gradual increase in the number of female HIV positive cases in comparison to male cases. Year wise sex distribution of the reported HIV positive cases is shown in the figure 16 and on this basis,

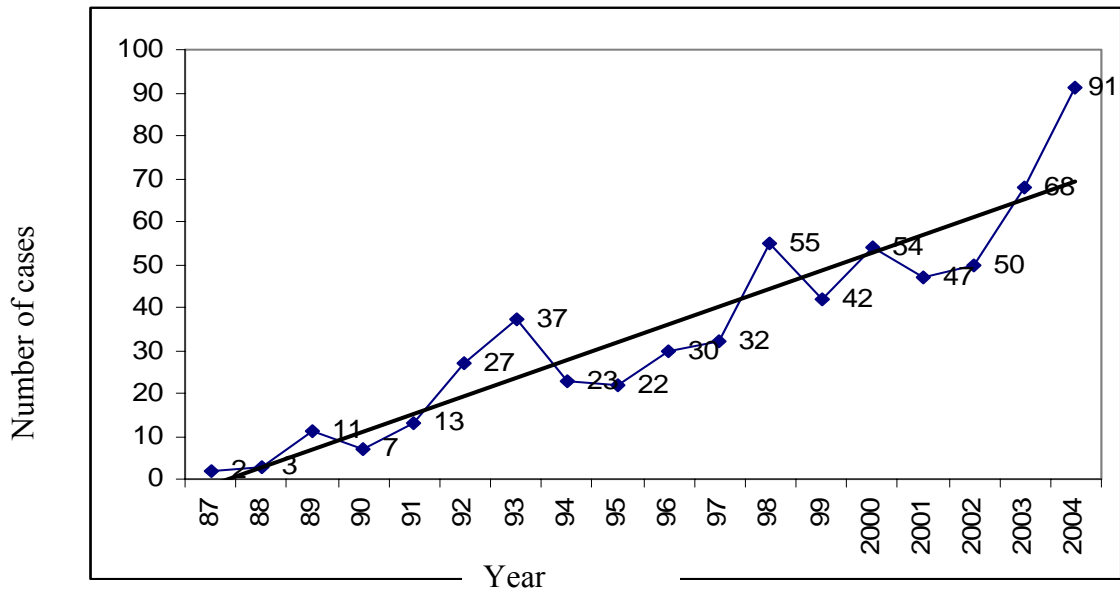
figure 17 shows the number of women infected with HIV for every 100 HIV infected men by span of time. The increased number of infection in women will lead to increased mother-to-child transmission of the virus.

Figure 14: Cumulative number of Reported HIV positive cases, Sri Lanka, 1987- June 2005



* up to June, T= Total, M= Male, F= Female

Figure 15: Reported HIV+ cases in Sri Lanka, 1987-2004 with linear trend line ¹⁸



Total =614

Table 14: Cumulative number of reported HIV positive cases by age & sex, Sri Lanka, as of 30 June 2004

Age	Male	Female	Total
0-9	9	3	12
-14	1	0	1
-19	0	1	1
-24	16	17	33
-29	39	28	67
-34	65	47	112
-39	57	48	105
-44	54	27	81
-49	35	23	58
50+	25	12	37
Unknown	28	17	45
Total	329 (59.6%)	223 (40.4%)	552

Figure 16: Reported HIV positive Cases in Sri Lanka by sex, 1987-2003 with linear trends

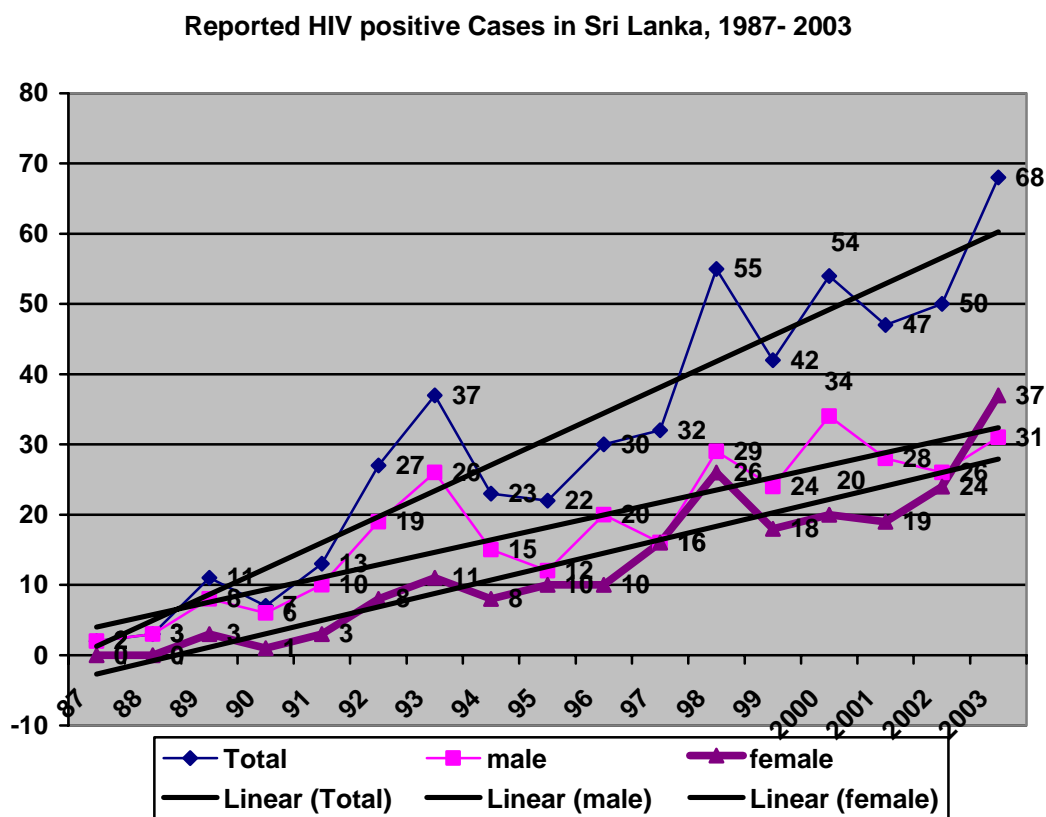
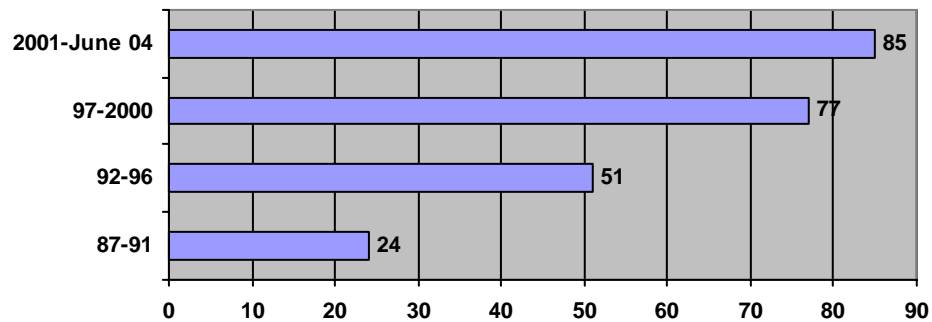


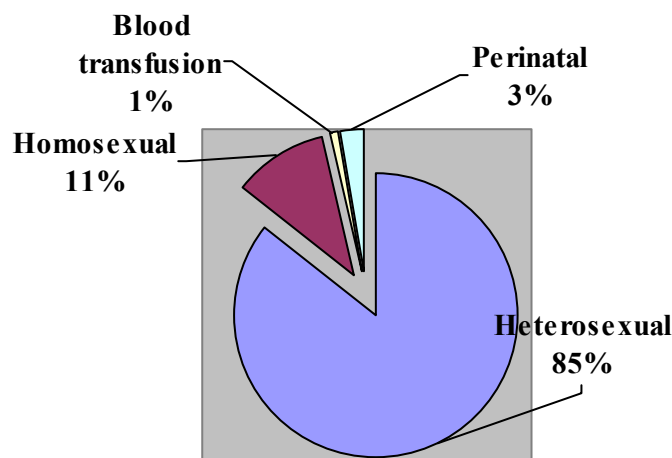
Figure 17: Number of women infected with HIV for every 100 HIV infected men in Sri Lanka



Transmission categories

The mode of transmission of reported HIV positive cases was available for 419 cases. Of these, over 96% of cases were sexual (85.4 % heterosexual and 11% homosexual). Twelve (2.9%) cases were reported as perinatally transmitted (Figure 18).

Figure 18: Transmission categories of HIV positive cases in Sri Lanka, 1987-June 2004 (n=419)



Trend of HIV infection

Though the reported data may suffer from under-reporting, these data do indicate an increasing trend in HIV infection in Sri Lanka and number of female cases is gradually increasing (Figures 16 &17). Although this country is considered a low HIV prevalence country within the South Asia region, there is no room for complacency. Prevention activities have to be intensified and sustained to prevent further spread of HIV.

The Maldives

The Maldives is a small independent island nation consisting of a chain of about 1,300 small coral islands and sand banks (roughly 202 of which are inhabited), grouped in clusters, or atolls in the Indian Ocean. The Maldivian are a mixed people, speaking an Indo-European language called Divehi. With the exception of those living in the capital Male (the only relatively large settlement in the Maldives), the inhabitants of the Maldives live in villages on small islands in scattered atolls.⁹ Some one hundred and eleven islands are used for hotel, industrial and other purposes, and 87 of these islands are exclusively used as tourist resorts. Tourism, fisheries, shipping and construction are the major industries³⁰ Tourism is a fast growing sector of the economy. Resort islands, and modern hotels in Male attract increasing numbers of tourists during the winter months.⁹ Its population was estimated to be about 318,000 in 2003.¹⁹

HIV and AIDS situation

As of end-2003, the estimated number of people living with HIV was less than one hundred (60) and the estimated prevalence among adult population (15-49) was less than 0.1%.²² This suggests that Maldives is a low HIV prevalence country with a very small magnitude of HIV epidemic. But despite this low level of HIV epidemic the country is not free of risk or vulnerability factors that may worsen the situation if proper attention is not given.

The important risk factors that can worsen the HIV/AIDS situation in Maldives are:^{22, 30}

- High mobility of the Maldivian for search of work-both internal and external
- Mobility of students for higher education in abroad
- High proportion (about 1/3rd) of population below 35 years of age
- High level of tourism and large number of expatriate workers
- Presence of High Risk Behaviour such as drug abuse and multiple sex partners with low condom use
- High rate of divorce and marriage also indicates increase number of sex partner exchange
- High prevalence of thalassemia requiring frequent blood transfusion
- Prevalence of STI

Reported HIV positive cases of Maldives as of end 2004

In 1991, Maldives detected its first AIDS case. As of December 2004, a total of 13 HIV positive cases were reported; among them 10 developed AIDS and 9 died.¹⁵ Out of 13 reported cases information about 12 is available; all of them were adults, and 2 were females (housewives). Of the 10 males, 7 were Seamen, 2 were migrants and one was resort employee.²²

Bangladesh

Bangladesh is a relatively small coastal country in south central Asia. To the South, Bangladesh has an irregular coastline fronting the Bay of Bengal and shares land borders with India and Myanmar. It is one of the most densely populated countries in the world, with the highest densities occurring in and around the capital city of Dhaka. It is also a predominantly rural country, with only about one-quarter of the population living in urban areas. Rural areas are often so thickly settled that it is difficult to distinguish any well-defined patterns of individual villages.^{9, 31} The estimated total population of the country in 2003 was about 146.7 million.¹⁹

HIV and AIDS situation

The first HIV positive case in this country was detected in 1989.³² Latest estimates suggest that as of end-2004, the estimated number of people living with HIV was 7775 with an adult HIV prevalence rate of less than 0.1%.³³

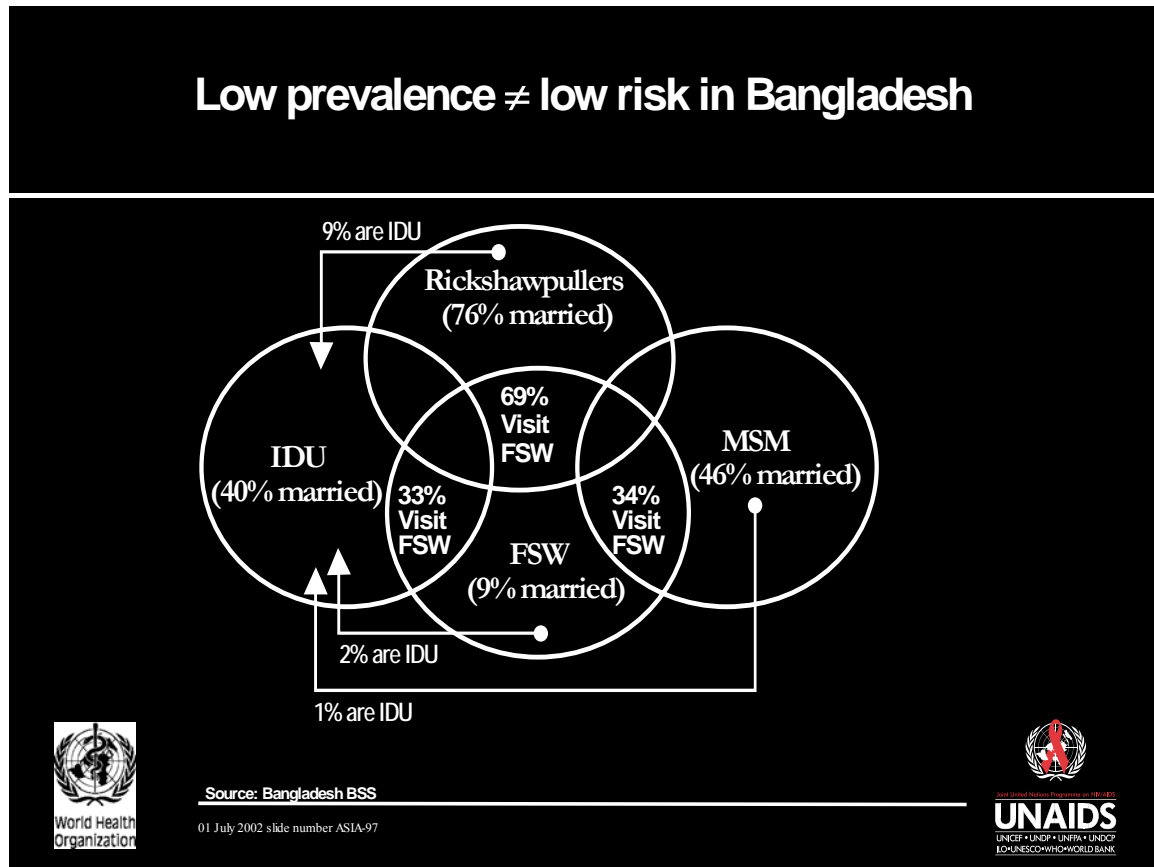
Bangladesh is a low HIV prevalence country, but it faces tremendous challenges in remaining so, because of very high rates of risk behaviours, low condom use, low level of risk perception and alarming levels of self reported sexually transmitted infections.³⁴

All of the known HIV- risk behaviours and factors- FSW, MSM, IDU, and "high" rates of STI- are acknowledged to be present in Bangladesh. As a result, there is increasing concern that marked epidemic spread of HIV might occur in a manner similar to that documented in several neighboring countries (parts of India, Myanmar, and Thailand).^{9, 34, 35}

Low levels of HIV but signs of risk^{9, 22, 35}

- Sex work exists at significant levels in Bangladesh.
- Behavioural surveillance revealed that large numbers of men (including rickshaw pullers, truckers and students) continued to buy sex- higher percent than Asian standards.
- Injecting drug use is also expanding, and needle sharing is a common norm.
- Extensive overseas migrant population is another risk factor.
- To complete the alarmingly high-risk picture, there is an active male-male sexual activity situation, both paid and non-paid.
- The risk is compounded by significant overlapping among all these different groups with high- risk behaviours (Figure 19).

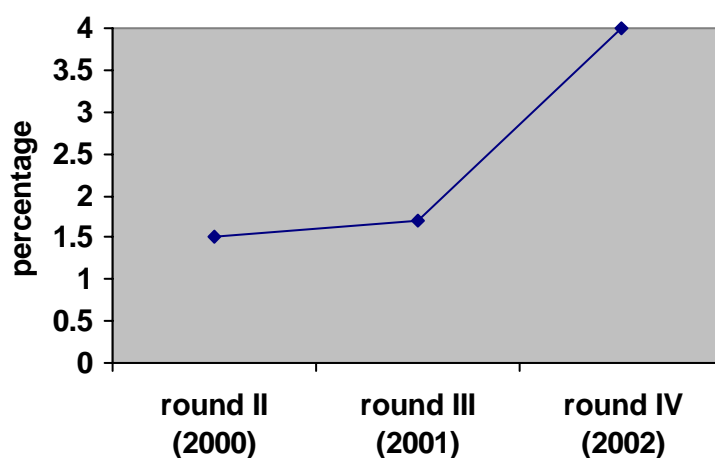
Figure 19: Low prevalence ≠ Low risks in Bangladesh²²



Prevalence Information and Surveillance data

In reality, the HIV epidemic in Bangladesh is not very well understood and the existing situation is only partly known. Although it is not known exactly how many people are infected, HIV is being detected among Bangladeshi populations and especially so among vulnerable cohorts. The first National Sentinel Surveillance on HIV sero-prevalence and high-risk behaviour was conducted in 1998-1999.²² Till now report of fourth round (2002) of national HIV and behavioural surveillance is available. According to this report, 4% of the injection drug users of Central Bangladesh were HIV positive (Trend is shown in figure 20). However HIV prevalence was found to be less than 1% among other vulnerable groups. The survey also found that large number of men (including rickshaw pullers, truckers and students) continued to buy sex. The survey also revealed very low use of condom.³⁵

Figure 20 HIV among injection drug users in Bangladesh, Central region, 2000-2002



Reported HIV positive cases with epidemiological analysis¹²

According to country report of National AIDS and STD control Programme, Bangladesh, as of December 1, 2004 the cumulative number of reported HIV positive cases became 465 in which male population predominates, M: F= 5.3:1 (Table15). Eighty-seven HIV infected persons developed AIDS of which 44 died.

Table 15 Cumulative No. of reported HIV positive cases as of December 1, 2004, Bangladesh

Sex	Number	(%)
	Male	484
Female	73	15.7
sex unknown	8	1.7
Total	465	100

Bhutan

The Kingdom of Bhutan is a sovereign kingdom in the Himalayas, bounded by India, Tibet, and China. Bhutan's rugged mountains and dense forests long rendered it inaccessible to the outside world until well into the 20th century. The building of a road network connecting Bhutan with India in the 1960s finally brought to an end Bhutan's historic isolation. From that time, Bhutan embarked on Programmes to build roads and hospitals and to create a system of secular education. Its governmental institutions were also modernized.⁹ Its estimated total population in 2003 was about 2257000.¹⁹

HIV and AIDS Situation

The first case of HIV in Bhutan was reported in 1993, and as of April 2001, 22 persons had been diagnosed with HIV infection, out of which 4 had died.^{22,36} Recent trends show an increase in the number of people diagnosed with HIV/AIDS and by end of May 2005 this number became 72 among which 15 have died.¹³ The number of HIV estimates was about 100 in 2000.³⁶ (*Latest estimated number was not shown in UNAIDS HIV/AIDS report 2004 due to lack of data.*)

HIV Positive cases and their status

As of May 2005 – a total of 72 cases have been detected and confirmed (figure 21) among them 39 were males and 33 were females. Out of the reported cases 15 have died (14 from AIDS and 1 from malaria).¹³

More than 52% of reported cases are consisted of housewives (15), Business persons (12) and security forces (11) (Table 16).

Heterosexual route is the primary mode of transmission among detected cases and about half of the detected cases got infected in Thimphu and Phuntsholing.¹³

Various screening methods are being used in Bhutan to detect HIV + cases. The number of cases detected by each method is shown in Table 17.

Figure 21: Cumulative Number of reported HIV Cases, Bhutan, 1993- May 2005

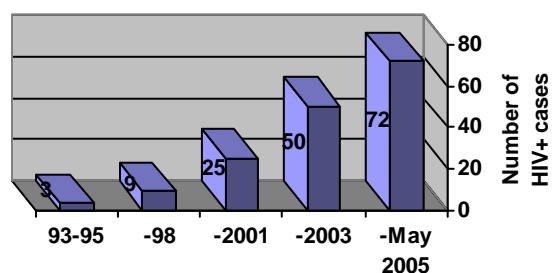


Table 16: Occupations of reported HIV + cases, Bhutan as of May 2005

<u>Occupation</u>	<u>Total cases</u>
Civil servant	06
Business person	12
House wives	15
CSW	07
Farmers	05
Security forces	11
Corporate Employees	06
Others	05
Minors	05
Total	72

Table 17: Mode of detection of reported HIV + cases, Bhutan as of May 2005

<u>Screening Method</u>	<u>Total cases</u>
Medical Screening	15
Blood Donor Screening	09
Sentinel Surveillance	20
Voluntary Testing	05
Contact Tracing	18
Vertical Transmission	05
Total	72

Impact of HIV

HIV epidemic has become a great threat to the overall human development. Countries that fail to bring the epidemic under control risk becoming locked in a vicious circle as worsening socioeconomic conditions render people, enterprises and communities even more vulnerable to the epidemic. Below a brief depiction of the impacts of HIV is given.

Demographic impact: ³⁴

- a. Death toll rises:
 - i. Countries affected by HIV epidemic loose young and productive people
 - ii. Child mortality increases; most children who are infected at birth or through breast-feeding develop AIDS and die before their first birth day.
- b. Dropping of life expectancy which signifies a major blow to a society's development; in Botswana life expectancy at birth dropped from 63 in 1985-90 to 36 in 2000-05

Impact on household: ³⁴

Impact of HIV and AIDS on households can be very severe

- c. Presence of HIV and AIDS will dissolve the household- as parents die children are sent to relatives for care and upbringing
- d. Loss of family income
 - i. Affected person cannot earn
 - ii. Other persons also have to direct more time and effort away from income generating activities.
 - iii. Care related expense and
 - iv. Funeral related expense collectively push affected household deeper into poverty
- e. Children especially girls are removed from schools as school uniforms and fees become unaffordable and their (children) labour and income-generating potential are required in the household
- f. Savings are used up or assets are sold
- g. Composition of household tends to change with fewer adults of prime working age

Impact on household food security: ³⁴

HIV/AIDS poses a potentially major threat to food security and nutrition, mainly

- h. By diminishing the availability of food (due to falling production, and loss of family labour, land, live stock and other assets) and
- i. By reducing access to food as households have less money

Impact on health sector: ³⁴

- j. In all affected countries HIV epidemic is bringing additional pressure to bear on the health sector. In countries where per capita health expenditure is low, extending prevention and care for STIs, counseling and testing, prevention of mother-to child transmission services and HIV treatment and care strain health budgets and systems.
- k. Health –care services face different levels of strain, depending on the number of people who seek services, the nature of the demands for health care , and capacity to deliver that care.
 - i. In early stages, HIV infected person (often experiencing common bacterial infections) tend to use primary health care and outpatient services.
 - ii. As HIV infection progresses to AIDS, there is an increase in total hospitalizations related to HIV/AIDS.
 - iii. Demands for community rooted home-based care. This needs also extra training and manpower.

Impact on Education sector: ³⁴

Deduction in school enrolment is one of the most visible effects due to

- l. Removal of children from school to care for parents and family members
- m. Inability to afford school fees and other expenses
- n. Increased child mortality due to AIDS
- o. Decreased birth rate due to AIDS related infertility
- p. Less number of teachers due to death of teachers both male and female due to AIDS
- q. Skilled and experienced teachers are not easily replaced
- r. Death of administrator
- s. Demands on the health and welfare services might divert resources from education to other sectors.

Impact on enterprises and workplaces:

HIV epidemic causes Declining profit and productivity in the affected enterprises and workplaces. ³⁴

Impact on TB epidemiology and TB control: ^{37, 38, 39, 40}

HIV drives the TB epidemic in several ways. HIV infection enhances and promotes the progression of both recently acquired and latent TB infection to clinical TB disease. HIV has become the most potent risk factor for reactivation of latent tuberculosis infection to active clinical disease. If HIV status is negative, lifetime risk of developing active TB is 5-10%; but if positive with HIV, then lifetime TB risk may be up to 60% (Figure 22). Consequently the TB control programme has to face the following difficulties:

- o Increased case load of active TB attributable to HIV
- o Increased HIV related morbidity and mortality in TB patients; in 2003, 4.7% of total TB deaths (22969/511679) in SAARC region were HIV attributed (Table 18).

- High rates of adverse drug reactions during TB treatment
- Higher default rates and lower cure rates
- Increased risk of TB transmission (including nosocomial transmission)
- Increased emergence of drug resistance
- Increased burden on TB services
- Delay of access to health services for TB suspects due to the stigma of HIV & AIDS

Figure 22: Life time risk of tuberculosis among HIV +ve & HIV –ve individuals

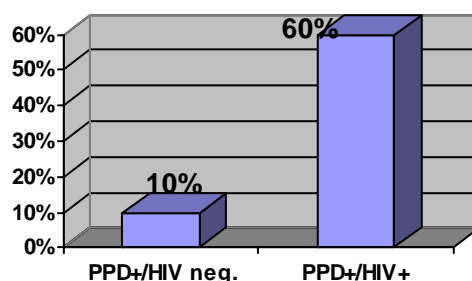


Table 18 Estimated HIV attributed TB mortality in SAARC region, 2003

Country	Number of Deaths due to TB		HIV attributable deaths
	Including HIV +	Excluding HIV +	
Bangladesh	83 533	83 467	66
Bhutan	467	466	1
India	352 085	329 915	22 170
Maldives	7	7	0
Nepal	7 399	7 138	261
Pakistan	66 503	66 037	466
Sri Lanka	1 685	1 680	5
Total	511 679	488 710	22 969

TB/HIV co-epidemic exerts negative impact not only on TB control programme but also on existing AIDS control programme; the impacts (on AIDS control programme) are as follows:

- Increased case load of active TB among people living with HIV
- TB may accelerate the progression of HIV-related immunosuppression.
- Increased morbidity and mortality from TB among PLWH
- Difficulties with diagnosing TB among PLWH owing to the different clinical presentations of HIV related TB
- Increased burden on HIV services.

The fact is that while each infection delivers debilitating impacts, the personal and societal burden of the TB/HIV co-infection surpasses either disease on its own. However, the impact of this co epidemic can be dealt. For this, both programmes need to be keen to cultivate

opportunities for collaboration, and a joint effort employing different but complementary strategies.

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Global Summary of the AIDS Epidemic as of Dec. 2005

No. of People living with HIV in 2005	Total	40.3 million (36.7-45.3 million)
	Adults	38.0 million (34.5-42.6 million)
	Women	17.5 million (16.2-19.3 million)
	Children under 15 yrs	2.3 million (2.1-2.8 million)
People newly infected with HIV in 2005	Total	4.9 million (4.3-6.6 million)
	Adults	4.2 million (3.6-5.8 million)
	Children under 15 yrs	700 000 (630 000-820 000)
AIDS Deaths in 2005	Total	3.1 million (2.8-3.6 million)
	Adults	2.6 million (2.3-2.9 million)
	Children under 15 yrs	570 000 (510 000-670 000)

Source: UNAIDS